SONY

3-798-411-21(1)

Stereo Cassette Deck

Operating Instructions

TC-WR665S
TC-WR565

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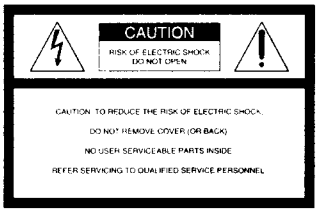
WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

For the customers in the United States


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK)
NO USER SERVICEABLE PARTS INSIDE
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL

This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Owner's Record

The model and serial numbers are located on the rear of the unit.
Record these numbers in the spaces provided below. Refer to them whenever you call upon your Sony dealer regarding this product.

Model No. _____
Serial No. _____

INFORMATION

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.
These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

CAUTION

You are cautioned that any changes or modifications not expressly approved in this manual could void your authority to operate this equipment.

For the customers in Canada

CAUTION

TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS POLARIZED AC PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

NOTICE FOR THE CUSTOMERS IN THE UNITED KINGDOM

A moulded plug complying with BS 1363 is fitted to this equipment for your safety and convenience.

Should the fuse in the plug supplied need to be replaced, a 5 AMP fuse approved by ASTA or BSI to BS 1362, (i.e. marked with ⓐ or ⓑ mark) must be used.

If the plug supplied with this equipment has a detachable fuse cover, be sure to attach the fuse cover after you change the fuse. Never use the plug without the fuse cover. If you should lose the fuse cover, please contact your nearest Sony service station.

IMPORTANT

If the plug supplied is not suitable for the socket outlets in your home, it should be cut off and an appropriate plug fitted in accordance with the following instructions.

The wires in this mains lead are coloured in accordance with the following code:

Blue: Neutral
Brown: Live

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black. The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red. Do not connect either wire to the earth terminal in the plug which is marked by the letter E or by the safety earth symbol ⏚ or coloured green or green-and-yellow.

WARNING

To prevent shock hazard, do not insert the plug cut off from the mains lead into a socket outlet. This plug cannot be used and should be destroyed.

Welcome!

Thank you for purchasing the Sony Stereo Cassette Deck. Before operating the unit, please read this manual thoroughly and retain it for future reference.

About This Manual

The instructions in this manual are for models TC-WR665S and TC-WR565. Check your model number by looking at the rear panel of your tape deck. In this manual, the TC-WR665S is the model used for illustration purposes. Any difference in operation is clearly indicated in the text, for example, "TC-WR665S only."

Type of differences

Feature \ Model	WR665S	WR565
Dolby S	•	
Memory Play	•	

Convention

The following icon is used in this manual:

Indicates hints and tips for making the task easier.

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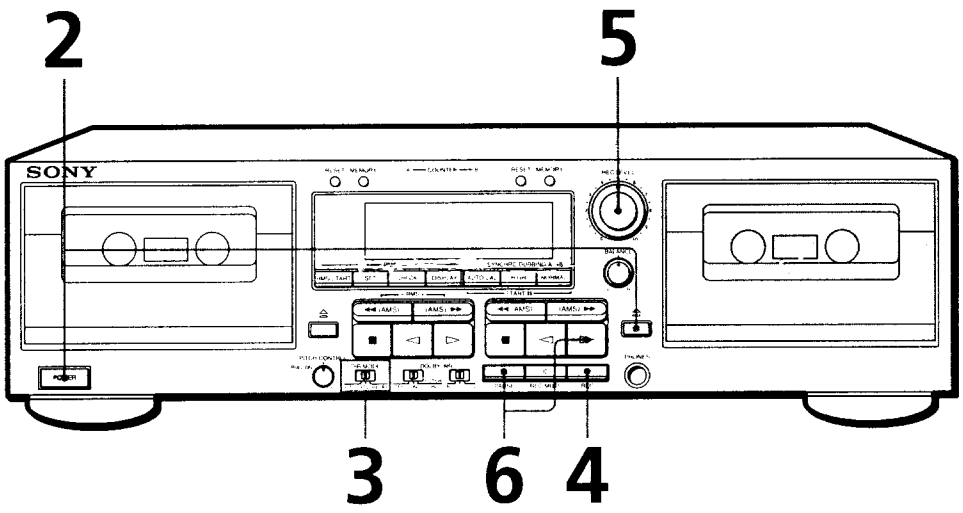
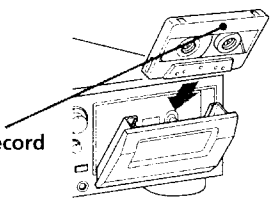
Recording on a Tape



- **See page 7 for hookup information.**
- **Use deck B (on your right hand side) for recording.**
- **Refer to "Dubbing a Tape" (page 11) to make a copy of the tape.**

1 Turn on the amplifier and play the program source you want to record.

2 Press POWER, and then press ⏏ and insert a cassette into deck B.



With the side you want to record facing you

3 Set DIR MODE.

To record on	Set to
Only one side	⇄
Both sides*	⇆

* Recording stops when the tape reaches the end of reverse side.

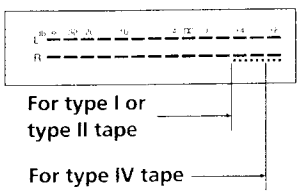
4 Press ● REC.

"▷" lights up for recording on the side facing you. If it doesn't, press ▷ once.

5 Turn REC LEVEL to adjust the recording level.

Turn REC LEVEL so that the peak level meters reach the recommended level for the corresponding tape type.

After you've done the adjustments, stop playing the program source.



6 Press ❚❚ PAUSE or ▷.

Recording starts.

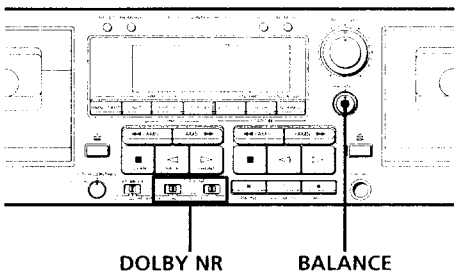
To protect recordings against accidental erasure

Break out the record-protect tab(s) (see page 13).

7 Start playing the program source.

To	Press
Stop recording	■
Start recording from the reverse side	◁
Pause	❚❚ PAUSE. Press the button again to resume recording.
Take out the cassette	⏏ after stopping recording

Use these buttons (controls) for additional operations



To adjust balance

Turn BALANCE so that L (left) and R (right) of the peak level meters in the display are at the levels you want.

To record with the Dolby NR* system

Set DOLBY NR to ON, and select B, C, or S (TC-WR665S only) before you start recording.

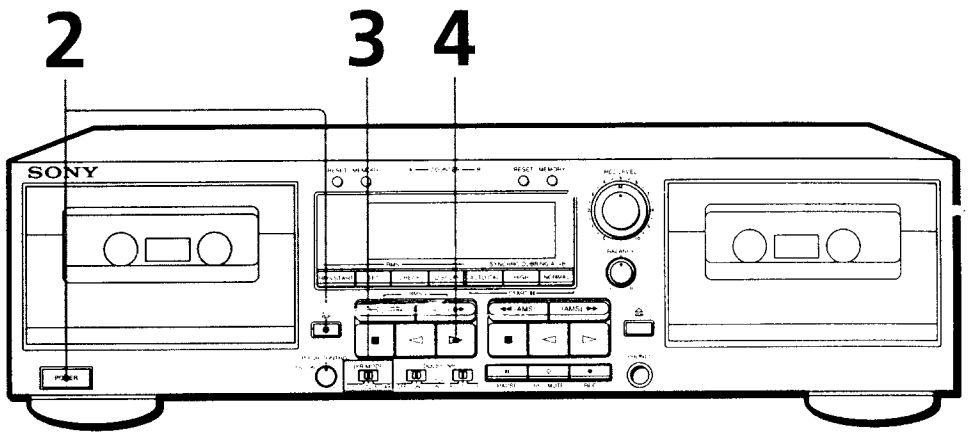
To record FM broadcasts with the Dolby NR* system

If the FM reception is unsatisfactory, set DOLBY NR to FILTER (multiplex filter) ON (see page 17).

* Dolby noise reduction and HX Pro headroom extension manufactured under license from Dolby Laboratories Licensing Corporation. HX Pro originated by Bang & Olufsen.

"DOLBY," the double-D symbol ⧈ and "HX PRO" are trademarks of Dolby Laboratories Licensing Corporation.

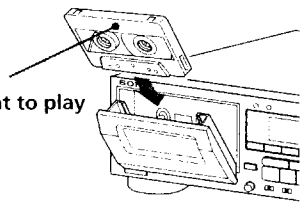
Playing a Tape



- **See page 7 for hookup information.**
- **You can use either deck for playback.**

1 Turn on the amplifier and select the tape deck position.

2 Press POWER, and then press ⏏ and insert a cassette.



With the side you want to play facing you

3 Set DIR MODE.

To play back	Set to
One side only	⇄
Both sides continuously*	↻
Both decks in succession*	RELAY

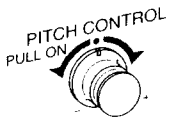
* The deck automatically stops after playing back five times.

4 Press ▷.

The deck starts playing. Adjust the volume on the amplifier.

To	Press
Stop playing	■
Start playback from the reverse side	◁
Pause (deck B only)	❚❚ PAUSE. Press the button again to resume play.
Fast-forward or rewind	▶▶ or ◀◀ when the deck is stopped
Take out the cassette	⏏ after stopping playing

To adjust the pitch



Pull the PITCH CONTROL knob out and turn it clockwise to raise the pitch, or counter-clockwise to lower it. You can adjust it during playback on deck A or normal-speed dubbing. Push the knob back in when not using.

To play a tape recorded with the Dolby NR system

Set DOLBY NR to ON and select the same position that the tape was recorded in—B, C, or S (TC-WR665S only).

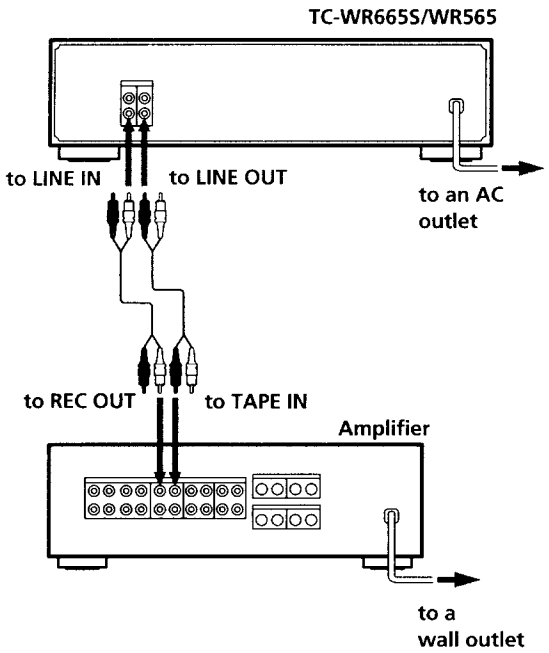
You can connect the headphones to PHONES

Unpacking

Check that you received the following items:
- Audio connecting cords (2)

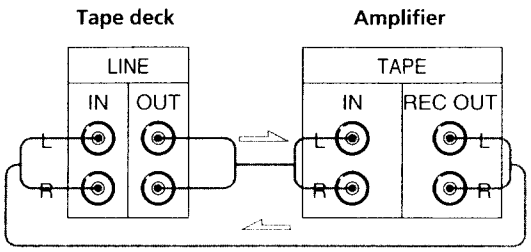
Hooking Up the System

This section describes how to hook up the tape deck to an amplifier. Be sure to turn off the power of each component before making the connections.



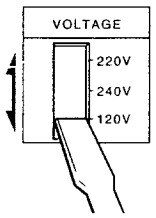
Hookups

When connecting an audio cord, be sure to match the color-coded cord to the appropriate jacks on the components: Red (right) to Red and White (left) to White. Be sure to make connections firmly to avoid hum and noise.
Connect the tape deck to the amplifier as shown below.



Setting the voltage selector (only on models supplied with a voltage selector)

Check that the voltage selector on the rear panel of the tape deck is set to the local power line voltage. If not, set the selector to the correct position using a screwdriver before connecting the AC power cord to an AC outlet.



Connecting the AC power cord

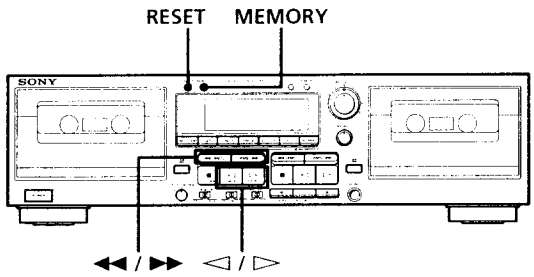
Connect the AC power cord to an AC outlet.

Where do I go next?

Now you're ready to use your tape deck.
For basic operations, go to pages 4 to 6; for advanced operations, go to the sections immediately after this one.

Locating a Track (Multi-AMS/ Auto Play/Memory Play (TC-WR665S only))

You can locate the following/previous tracks within a range of 30 tracks (Multi-AMS: Automatic Music Sensor) or the beginning of a tape quickly (Auto Play). You can even locate a specific point anywhere on a tape (Memory Play, TC-WR665S only).



Note

Check the direction indicator of the deck you use. When you locate a track on the reverse side (when "◁" lights up), press the button(s) in the parentheses.

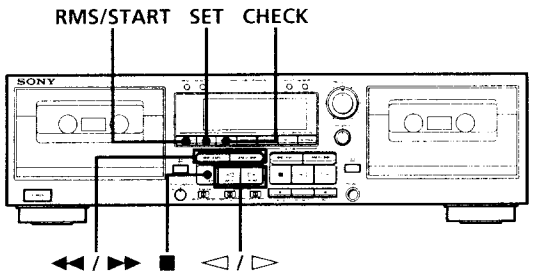
To locate	Press
The beginning of the next or succeeding tracks (Multi-AMS)	▶▶ (or ◀◀) as many times as you want during playback. For example, to locate 2 tracks ahead, press twice.
The beginning of the current track (Multi-AMS)	◀◀ (or ▶▶) once during playback
The beginning of the preceding tracks (Multi-AMS)	◀◀ (or ▶▶) as many times as you want during playback. For example, to locate 2 tracks behind, press three times.
The beginning of a tape (Auto Play)	MEMORY on the deck being used repeatedly until "M" disappears in the display. Then press ◀◀ (or ▶▶) while holding down ▷ (or ◁).
A particular point on a tape (Memory Play, TC-WR665S only)	MEMORY on the deck being used repeatedly until "M" appears in the display. Find the point you want, then press RESET to reset the tape counter and to memorize the point. To locate the memorized point and start playback, press ◀◀ (or ▶▶) while holding down ▷ (or ◁). (Press ◀◀ or ▶▶ to stop at "0000".)

Notes

- The Multi-AMS function may not work correctly if:
  - — the blank space between tracks is less than 4 seconds long.
  - — there is a passage of low frequencies or very low volume within a track.
  - — the signal strength of the left and right channels are very different.
- The Multi-AMS function doesn't work on one deck whenever the other deck is playing, recording, or in pause.
- Even if DIR MODE is set to ⇄, the deck stops when the current side reaches the end during Multi-AMS operation.
- The tape counters are reset to "0000" when you turn off the tape deck.

Creating Your Own Program (RMS Play)

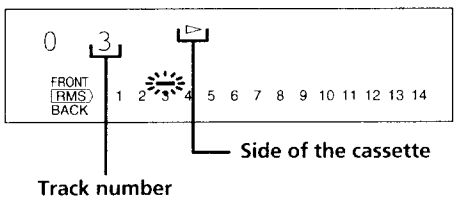
By creating a program, you can play back tracks on deck A in any order that you want. The Random Music Sensor (RMS) function lets you create a program of up to 28 tracks, from the 1st to the 14th tracks on each side of the tape.



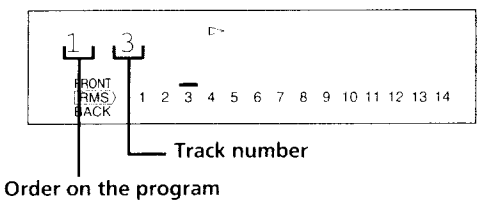
1 Press RMS/START.
"RMS" and a flashing cursor appear in the display.

2 Press ◁ (BACK) or ▷ (FRONT) to select the side of the tape.
"◁" or "▷" appears in the display.

3 Press ◀◀ or ▶▶ repeatedly until the track number you want appears in the display.



4 Press SET to store your selection.
To program the same track again, press SET once more.



5 Repeat Steps 2 to 4 to program more tracks.

If "FULL" appears in the display
This means that you've already programmed 28 tracks and can't program any more.

6 Press RMS/START to start RMS Play.
The peak level meters appear in the display.

To stop RMS Play
Press ■ (CLEAR) once. The RMS program still remains.

To cancel RMS Play
Press ■ (CLEAR) repeatedly until the peak level meters appear in the display or eject the tape in deck A. When RMS Play is canceled, the RMS program is automatically erased.

To alternate between the RMS and peak level meter displays
Press DISPLAY.

You can play the program again after RMS Play ends
Press RMS/START.

Notes
- During RMS play, you can only use CHECK, DISPLAY, ■ on deck A, and ■, ◀◀, ▶▶ on deck B.
- The RMS function may not work properly if a blank space between tracks is short.
- If there is a long blank space between tracks, the deck may fast-forward a portion of the blank space.
- If your program includes a number for a track that does not exist, the deck will skip that number during RMS Play.

Checking the order of tracks in the program

Press CHECK.
Each time you press this button, the display shows the track numbers in the order they were programmed. After the last track in the program, "End" appears in the display.

Adding tracks to the end of a program

Press ■ (CLEAR) once, and follow Steps 2 to 5 in "Creating Your Own Program (RMS Play)" on this page.

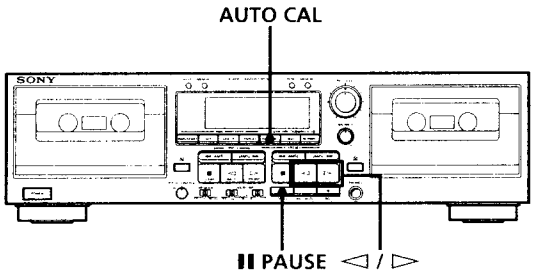
To create another program
Press ■ (CLEAR) until the order on the program returns to 0 and the cursor flashes above track number 1 in the display, then follow Steps 2 to 5.

You can use your Sony remote to perform RMS programming
If your Sony stereo receiver's remote has RMS buttons, do the following steps.
1 Turn on the receiver and press TAPE.
2 Press RMS/START.
3 Press ▶ or ◀ to select the front or reverse side of the tape, and the number keys and the >10 key to specify the tracks.
4 Press RMS/START again to start RMS Play.

Note
For more information on the availability of Sony stereo receiver remotes with RMS capability, contact your nearest Sony dealer.

Adjusting Bias and Recording Level Calibration Automatically

Since there are many different types of cassettes on the market, your tape deck automatically sets the appropriate equalization characteristics and bias current for each tape type (ATS: Automatic Tape Selection). However, you can get better recording results by doing the automatic bias current and the recording level calibration.



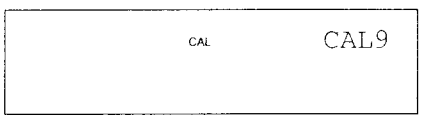
1 Insert the cassette you want to record on into deck B.
Make sure the record-protect tabs on the cassette have not been removed.

2 Press AUTO CAL until "CAL" appears in the display.

3 Press ▷ or ◁ to select the side of the tape to be recorded.

To select	Press
The front side	▷
The reverse side	◁

4 Press II PAUSE to start the automatic calibration procedure.
The automatic calibration procedure starts (i.e., recording test tones, rewinding, and playing back). During the calibration, the counter changes from 9 to 0.



When the automatic calibration procedure ends, the tape rewinds to the original position, the counter returns to normal and the tape deck stops.

5 Start the actual recording (see page 4).

To cancel the automatic calibration function
Press ■ on deck B.

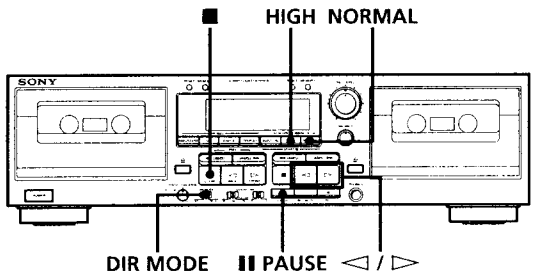
If "CAL" flashes continuously
The automatic calibration procedure has been interrupted by:
— The end of the tape. Reverse the tape direction or rewind the tape to a new position that allows recording of the test tone.
— Damaged tape or dirty heads. Change the cassette or clean and demagnetize the heads (see page 14).

Updating the calibration setting

As long as the tape deck stays on, calibration data are saved and called up each time you insert a cassette of the same type (I, II or IV). "CAL" appears in the display when you insert a cassette to indicate that calibration data for that tape type exists. However, we recommend that you repeat the automatic calibraion procedure each time you insert a new cassette since cassettes of the same type also vary in their characteristics. Before recalibrating, be sure to clear the existing calibration data by pressing AUTO CAL until "CAL" disappears from the display. Then start from Step 2 of the automatic calibration procedure.

Dubbing a Tape

You can copy a tape in deck A to a tape in deck B at normal or high speed.



1 Insert the recorded cassette into deck A and a blank cassette into deck B.
Make sure the record-protect tabs on the cassette in deck B have not been removed.

2 Select the side(s) to be recorded on.

To record on	Set DIR MODE to
One side	⇉
Both sides	⇄. Recording on the reverse side on deck B starts independently of playback on deck A.
	RELAY. Recording on the reverse side on deck B starts simultaneously with playback of the reverse side on deck A.

3 Press HIGH or NORMAL to select the dubbing speed.
"HIGH" or "NORM" appears in the display.
The tape deck changes to dubbing standby.

4 Select the side from which to start dubbing.

To record from	Press
The front side	▷
The reverse side	◁

5 Press II PAUSE to start dubbing.

To stop dubbing

During	Press
Normal-speed dubbing	■ on deck B
High-speed dubbing	■ on either deck

During high-speed dubbing
Only ■ is operative.

You don't have to adjust the recording level or select the Dolby NR system during dubbing
Dubbing is automatically performed with the same recording level and Dolby NR system as the original in deck A. If, however, you want to monitor the sound during normal-speed dubbing, set DOLBY NR to match the tape in deck A (see page 5).

Note
If a TV set is placed near the tape deck, noise may occur during high-speed dubbing. In that case, turn the television set off or move it away from the tape deck.

Dubbing only specific portions

You can do this only during the normal-speed dubbing.

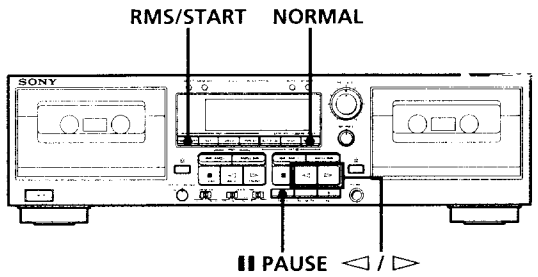
1 Press ■ on deck A at the portion you want to skip.
Deck B changes to recording pause.

2 Locate the point you want to resume recording on deck A, then stop the tape.

3 Press II PAUSE to resume dubbing.

Recording Your Own Program (RMS Dubbing)

You can record an RMS program that you've created (see "Creating Your Own Program (RMS Play)" on page 9). This function works only at normal speed.



1 Insert the recorded cassette into deck A and a blank cassette into deck B.
Make sure the record-protect tabs on the cassette in deck B have not been removed.

2 Program tracks on deck A (see Steps 1 to 5 on page 9).

3 Press NORMAL to change the tape deck to dubbing standby.

4 Select the side of the tape in deck B you want to record on.

To start recording	Press
On the front side	▷
On the reverse side	◁

5 Press RMS/START or II PAUSE to start RMS Dubbing.

To stop RMS Dubbing

Press ■ on deck B. The RMS program remains even after RMS Dubbing stops.

To insert a blank space on the tape before you start RMS Dubbing

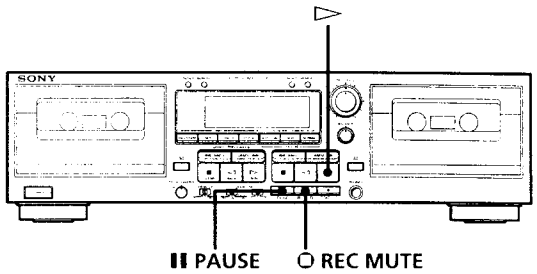
You can insert a blank space of 4 seconds or more on the tape in deck B by pressing O REC MUTE after Step 4.
For details, see "Inserting a Blank Space During Recording (Record Muting)" on this page.

A blank of 10 seconds is automatically inserted on the tape when you start RMS Dubbing if:

— you insert a new cassette into deck B.
— the tape in deck B is completely rewound to its beginning and automatically stopped.

Inserting a Blank Space During Recording (Record Muting)

You can insert a blank space of 4 seconds between each track. The blank spaces allow you to locate the start of specific tracks afterwards using the Multi-AMS function (see page 8). You can also use this function to erase unwanted portions on a tape.



1 Start recording.

2 Press O REC MUTE where you want to insert a blank space.
"REC" flashes in the display and a blank is recorded on the tape.
After 4 seconds, "II" lights up and the tape deck changes to recording pause.

3 Press II PAUSE or ▷ to resume recording.

If you want to insert a blank space longer than 4 seconds

Hold down O REC MUTE as long as you want. After 4 seconds, "REC" flashes faster.
When you release O REC MUTE, "II" lights up and the tape deck changes to recording pause.
Press II PAUSE or ▷ to resume recording.

Precautions

On safety

- Do not disassemble the cabinet — this may result in an electrical shock. Refer servicing to qualified personnel only.
- Should any solid object or liquid fall into the cabinet, unplug the tape deck and have it checked by qualified personnel before operating it any further.

On power sources

- Before operating the tape deck, check that the operating voltage of the tape deck is identical with your local power supply. The operating voltage is indicated on the nameplate at the rear of the tape deck.
- The unit is not disconnected from the AC power source (mains) as long as it is connected to the wall outlet, even if the unit itself has been turned off.
- If you are not going to use the tape deck for a long time, be sure to disconnect the tape deck from the wall outlet. To disconnect the AC power cord, grasp the plug itself; never pull the cord.
- AC power cord must be changed only at the qualified service shop.

On operation

Because of a safety mechanism, the function buttons will not operate if the cassette holder is not completely closed, if there is no cassette in the cassette holder, or if a cassette has been incorrectly inserted into the cassette holder.

On placement

- Place the tape deck in a location with adequate ventilation to prevent heat build-up in the tape deck.
- Do not place the tape deck:
  - — on a soft surface such as a rug that might block the ventilation holes on the bottom.
  - — in a location near heat sources.
  - — in a place subject to direct sunlight.
  - — in an inclined position.
  - — in a place subject to excessive dust or mechanical shock.

On cleaning the tape deck

Clean the cabinet, panel and controls with a soft cloth slightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent such as alcohol or benzine.

For the customers in the United States

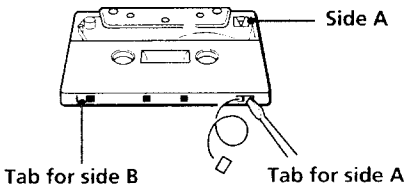
For detailed safety precautions, see the leaflet "IMPORTANT SAFEGUARDS".

If you have any questions or problems concerning your tape deck, please consult your nearest Sony dealer.

Notes on Cassette Tapes

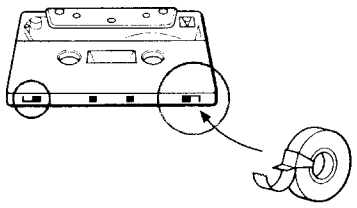
To protect a recording on side A or B

Break out the respective tab.

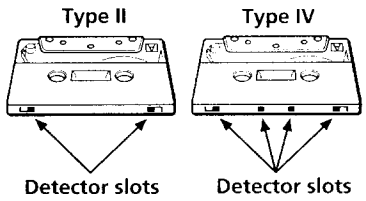


To record on a tape with a missing record-protect tab

Cover the respective tab hole with adhesive tape.



When you are using a type II or type IV tape, be careful not to cover the detector slots that the deck uses to determine the tape type.



On tapes longer than 90 minutes

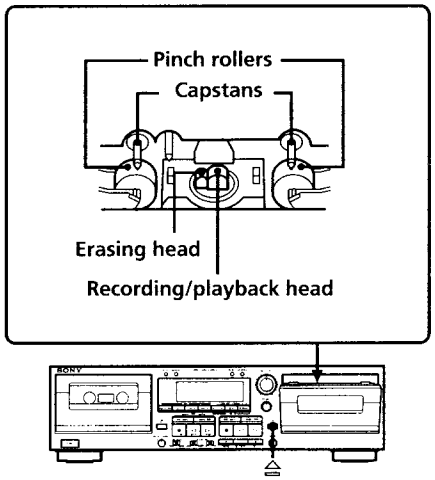
We do not recommend the use of tapes longer than 90 minutes except for a long continuous recording or playback. They are very thin and tend to stretch easily.

On handling cassettes

- To prevent the heads and tape path from getting dirty, avoid touching the tape surface of a cassette.
- Place cassettes away from equipment with magnets, such as speakers and amplifiers, which may cause tape distortion or erase the recordings.
- Do not expose cassettes to direct sunlight, extremely cold temperature, or moisture.

Cleaning

Inside the cassette holder of Deck B



Cleaning the heads and tape path

Clean the heads and tape path of the tape deck after every 10 hours of operation to guard against:

- low-quality sound
- a decrease in sound level
- excessive wow or flutter
- sound dropout
- incomplete erasure
- impairment of recording function

To ensure better recording, we recommend that you clean the heads and tape path before every recording.

1 Press ⏏ to open the cassette holder. Grasp the front cover on both sides and gently lift to remove it.

2 With the tape deck turned off, wipe the heads, the pinch rollers and the capstans with a cotton swab slightly moistened with alcohol or a commercially available cleaning fluid for tape decks.

3 Replace the front cover.

Demagnetizing the heads

After 20 to 30 hours of use, or when you notice a hissing sound or loss of high frequencies, demagnetize the heads with a commercially available demagnetizer for tape decks. Please refer to the instructions of the demagnetizer.

Troubleshooting

If you've experienced any of the following difficulties while using the tape deck, use this troubleshooting guide to help you remedy the problem. Should the problem persist, consult your nearest Sony dealer.

The function buttons do not work.

- ➡ The tape deck has been just turned on and does not operate for about 3 seconds. Wait until "❚❚" stops flashing.
- ➡ Check that the cassette is inserted correctly and the cassette holder is closed completely.

The tape deck does not play or record.

- ➡ There is no cassette in the cassette holder.
- ➡ The tape has come to the end.
- ➡ The tape is slack. Take up the tape slack.
- ➡ The record-protect tab has been removed from the cassette (see page 13).
- ➡ Make sure the amplifier setting is correct.
- ➡ Check that the tape deck connections are secure.
- ➡ The heads and tape path are dirty. Clean them (see page 14).
- ➡ The recording/playback head is magnetized. Demagnetize it (see page 14).

There is excessive wow, flutter or sound drop-out.

- ➡ The capstans and pinch rollers are dirty. Clean them (see page 14).

There is a decrease in sound level, sound drop-out, or poor reproduction of high frequencies./The tape does not erase completely./Noise increases.

- ➡ The recording/playback head and tape path are dirty. Clean them (see page 14).
- ➡ The recording/playback head is magnetized. Demagnetize it (see page 14).

There is hum or noise.

- ➡ The tape deck is placed near a TV or VCR. Move the tape deck away from the TV or VCR.
- ➡ The tape deck is placed on or under the amplifier. Move the tape deck away from the amplifier.

There is an unbalanced tone.

- ➡ Check that DOLBY NR position is the same as when the tape was recorded.
- ➡ The tape deck is placed near a TV or VCR. Move the tape deck away from the TV or VCR.

The tape stops before the tape has been fully rewound.

- ➡ The tape is slack. Take up the tape slack.
- ➡ If "M" is shown in the display, press MEMORY repeatedly until "M" disappears.
- ➡ The cassette shell is bent. Use another cassette.

The Multi-AMS function does not work properly.

- ➡ One of the tracks contains a long pause, a passage of low frequencies or very low volume, or a gradual increase or decreace in volume.
- ➡ The space before a track is less than 4 seconds long. Insert a blank space of 4 seconds using ○ REC MUTE.
- ➡ The signal strength of the left and right channels are very different.
- ➡ There is noise in the space before a track.
- ➡ You pressed ▶▶ (or ◀◀) immediately before the beginning of the next track or immediately after the beginning of the current track.

The DOLBY NR function does not work during playback.

- ➡ The PITCH CONTROL function is on and the frequency characteristics of the sound is altered. Push the PITCH CONTROL knob in to turn off the function.

There is excessively loud tape transport noise during fast-forwarding or rewinding.

- ➡ This noise is caused by the cassette and is not a mechanical problem.

⏏ does not work.

- ➡ The tape deck is playing back or recording. Press ■ or ❚❚ PAUSE to stop playback or recording before pressing ⏏.
- ➡ There has been a power failure or the power cord has been disconnected during tape operation. Reconnect the power.

Specifications

System

Recording system
4-track 2-channel stereo

Fast-winding time (approx.)
90 sec. (with Sony C-60 cassette)

Bias
AC bias

Signal-to-noise ratio (at peak level and weighted with Dolby NR off)
Type I tape, Sony Type I (NORMAL): 55 dB
Type II tape, Sony Type II (HIGH): 57 dB
Type IV tape, Sony Type IV (METAL): 58 dB

S/N ratio improvement (approximate values)
With Dolby B NR on: 5 dB at 1 kHz, 10 dB at 5 kHz
With Dolby C NR on: 15 dB at 500 Hz, 20 dB at 1 kHz
With Dolby S NR on (TC-WR665S only): 10 dB at 100 Hz, 24 dB at 1 kHz

Harmonic distortion
0.4% (with Type I tape, Sony Type I (NORMAL): 160 nWb/m 315 Hz, 3rd H.D.)
1.8% (with Type IV tape, Sony Type IV (METAL): 250 nWb/m 315 Hz, 3rd H.D.)

Frequency response (Dolby NR off)
Type I tape, Sony Type I (NORMAL): 30 - 15,000 Hz (±3 dB, IEC)
Type II tape, Sony Type II (HIGH): 30 - 17,000 Hz (±3 dB, IEC)
Type IV tape, Sony Type IV (METAL): 30 - 18,000 Hz (±3 dB, IEC)
30 - 13,000 Hz (±3 dB, –4 dB recording)

Wow and flutter
TC-WR665S:
±0.13% W. Peak (IEC)
0.07% W. RMS (NAB)
±0.18% W. Peak (DIN)
TC-WR565:
±0.14% W. Peak (IEC)
0.08% W. RMS (NAB)
±0.19% W. Peak (DIN)

Variable pitch range (approx.)
–30 to +30%

Inputs

Line inputs (phono jacks)
Sensitivity : 0.16 V
Input impedance : 47 kilohms

Outputs

Line outputs (phono jacks)
Rated output level : 0.5 V at a load impedance of 47 kilohms
Load impedance : Over 10 kilohms

Headphones (stereo phone jack)
Output level : 1 mW at a load impedance of 32 ohms

General

Power requirements

Where purchased	Power requirements
U.S.A. and Canada	120 V AC, 60 Hz
U.K. and Continental Europe	220 - 230 V AC, 50/60 Hz
Australia	240 V AC, 50/60 Hz
Other countries	120/220/240 V AC, 50/60 Hz

Power consumption
26 W

Dimensions (approx) (w/h/d)
Model for U.K. and Australia:
430 × 123 × 300 mm (w/h/d)
(17 × 4 7/8 × 11 7/8 inches)
Model for other countries:
430 × 123 × 290 mm (w/h/d)
(17 × 4 7/8 × 11 1/2 inches)
including projecting parts and controls

Mass (approx.)
4.5 kg (9 lbs 15 oz)

Supplied accessories
Audio connecting cords (2 phono plugs - 2 phono plugs) (2)

Optional accessory
Remote commander RM-J902

Design and specifications are subject to change without notice.

Glossary

ATS
Automatic Tape Selection. The tape deck automatically sets the appropriate equalization characteristics and bias current according to the type of tape inserted in the deck.

Automatic calibration
The automatic adjustment of the bias current and recording level for the inserted tape.
This adjustment works together with the deck's ATS (Automatic Tape Selection, see above) to get the best possible recording results on any tape.

Dolby HX PRO system
A system that reduces distortion and noise in high-frequency response during recording. A tape recorded with this system produces the same high-quality sound even when played on other tape decks.

Dolby NR (noise reduction) system
A system that eliminates tape hiss noise by boosting low-level signals in the high-frequency range during recording, then lowering them during playback.
There are four types of systems: A, B, C and S (provided on TC-WR665S only). Type A is for professional use (not available on your tape deck), and types B, C and S are for consumer use. Type S has the maximum noise reduction capability, followed by types C and B.

Multi-AMS
Multi-Automatic Music Sensor is a function that locates the beginning of up to 30 tracks before or after the current track by detecting the blank space (of over 4 seconds) between tracks.

Multiplex filter
A filter for eliminating the 19-kHz stereo carrier and the 38-kHz sub-carrier signals that may impair the Dolby NR system. Though tuners are usually equipped with this filter, if you got poor results when recording FM broadcasts with the Dolby NR system, your tuner may not have a filter or the filter may not be working. In this case, set the DOLBY NR switch on the tape deck to FILTER ON.

Test tones
Signals (10-kHz and 400-Hz) generated by the tape deck for bias current and recording level calibration.

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